

# 7<sup>TH</sup> GRADE CURRICULUM OUTLINE

## TRANSPORTATION MODULE

### Lesson I: 7<sup>th</sup> grade

#### **Transportation and Energy Use: Powershift DVD and Discussion**

- Watch Powershift DVD
- Class discussion about the video and personal views on global energy use issues and renewable energy ideas.

### Lesson 2: 7<sup>th</sup> grade

#### **Transportation: Trains, Planes, and Automobiles. . .and Bikes and Boats**

- Brainstorming session
- Create word maps: different modes of transportation
- 2-minute transportation slide show

### Lesson 3: 7<sup>th</sup> grade

#### **Transportation through Time: Creating A Transportation Timeline**

- Brainstorming session
- Creating a transportation timeline

#### **Resources:**

*DK Visual Timeline of Transportation*, Anthony Wilson, 1995, ISBN# 1-56458-880-7

### Lesson 4: 7<sup>th</sup> Grade

#### **Investigating Transportation: A Small Group Research Project**

- Part #1: Begin history of transportation research project
- Discussion and exercises on how to participate in effective small group projects

### Lesson 5: 7<sup>th</sup> Grade

#### **Investigating Transportation: A Small Group Research Project**

- Part #2: Discuss challenges, obstacles, questions

### Lesson 6: 7<sup>th</sup> grade

#### **Investigating Transportation: A Small Group Research Project**

- Part #3: Presentations and discussion

### Lesson 7: 7<sup>th</sup> grade

#### **A Cursory Glance: Gasoline Production**

- Class reading & discussion lecture / note-taking assignment

## **Lesson 8: 7th grade**

### **A cursory glance: The Four-Stroke Internal Combustion Engine**

- The history of the combustion engine
- How do they work
- Combustion chemistry
- Drawing combustion engines
- Teacher-led demonstration: potato rockets

## **Lesson 9: 7th grade**

### **Automobile emissions and pollutants, and global warming**

- Reading and discussion about global warming
- Discuss the automobile's role in global warming

## **Lesson 10: 7th grade**

### **Creating Change: Personal Decision-making and Automobiles**

- U.S. driving habits and gasoline consumption: analysis and calculations
- Hybrid vehicle technology: reading and discussion
- Understanding feedback loops—global warming and the impacts of personal decision-making